



SUPPLEMENTAL/BID BULLETIN

BID BULLETIN NO. 1

24 August 2023

Name of Project: **Procurement of Learning Equipment and Systems for the 2021 Regional TVET Innovation Centers (RTICs)**

Pursuant to Section 22.5 of the Revised Implementing Rules and Regulations of Republic Act No. 9184, this Bid Bulletin No. 1 is being issued to further clarify the provisions in the Bidding Documents with reference to the queries/concerns raised by the bidders.

A. CLARIFICATION ON THE INVITATION TO BID

1. On the Lot 2 (Paragraph 1)

ORIGINAL			AMENDED		
LOT NO.	LOT TITLE	ABC (IN PHILIPPINE PESO)	LOT NO.	LOT TITLE	ABC (IN PHILIPPINE PESO)
2	Industrial Automation	62,130,609.66	2-A	Industrial Automation PKG 1	27,437,688.53
			2-B	Industrial Automation PKG 2	31,544,401.68
			2-C	Industrial Automation PKG 3	1,218,534.44
			2-D	Industrial Automation PKG 4	685,522.88
			2-E	Industrial Automation PKG 5	1,244,462.13

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2. On the applicable fees of the Bidding Documents (Paragraph 5)

ORIGINAL			AMENDED		
LOT NO.	ABC (in Philippine Peso)	Cost of Bidding Documents (in Philippine Peso)	LOT NO.	ABC (in Philippine Peso)	Cost of Bidding Documents (in Philippine Peso)
2	62,130,609.66	50,000.00	2-A	27,437,688.53	25,000.00
			2-B	31,544,401.68	25,000.00
			2-C	1,218,534.44	5,000.00
			2-D	685,522.88	1,000.00
			2-E	1,244,462.13	5,000.00

B. CLARIFICATION ON THE BIDDING DOCUMENTS

1. On the number of lots (Clause 1 of Section II Instructions to Bidders [ITB])

ORIGINAL	AMENDED
<p>1. Scope of Bid</p> <p>The Procuring Entity, TESDA wishes to receive Bids for the Procurement of Learning Equipment and Systems for the 2021 Regional TVET Innovation Centers (RTICs) with identification number TESDA-CO-2023-04.</p> <p>The Procurement Project (referred to herein as "Project") is composed of ten (10) lots, the details of which are described in Section VII (Technical Specifications).</p>	<p>1. Scope of Bid</p> <p>The Procuring Entity, TESDA wishes to receive Bids for the Procurement of Learning Equipment and Systems for the 2021 Regional TVET Innovation Centers (RTICs) with identification number TESDA-CO-2023-04.</p> <p>The Procurement Project (referred to herein as "Project") is composed of fourteen (14) lots, the details of which are described in Section VII (Technical Specifications).</p>

2. On the nature of Single Largest Completed Contract (SLCC) (Instructions to Bidders [ITB] Clause 5.3 of the Bid Data Sheet)

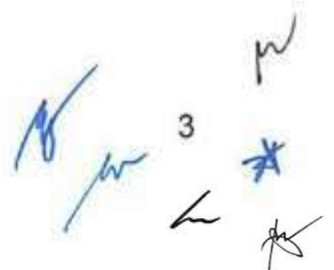
ORIGINAL			AMENDED		
LOT NO.	LOT NAME	NATURE OF SLCC	LOT NO.	LOT NAME	NATURE OF SLCC
2	Industrial Automation	Contract similar to supply and/or installation/ integration of industrial automation and process controls, and/or training equipment	2-A	Industrial Automation PKG 1	Contract similar to supply and/or installation/integration of industrial automation and process controls, training equipment, and/or IT equipment
			2-B	Industrial Automation PKG 2	Contract similar to supply and/or installation/integration of industrial automation and process controls, training equipment, and/or IT equipment

2

ORIGINAL			AMENDED		
LOT NO.	LOT NAME	NATURE OF SLCC	LOT NO.	LOT NAME	NATURE OF SLCC
			2-C	Industrial Automation PKG 3	Contract similar to supply and/or installation/integration of industrial automation and process controls, training equipment, and/or IT equipment
			2-D	Industrial Automation PKG 4	Contract similar to supply and/or installation/integration of industrial automation and process controls, training equipment, and/or IT equipment
			2-E	Industrial Automation PKG 5	Contract similar to supply and/or installation/integration of industrial automation and process controls, training equipment, and/or IT equipment
3	Building Automation	Contract similar to supply and/or installation/integration of building automation, electrical systems, and/or training equipment	3	Building Automation	Contract similar to supply and/or installation/integration of building automation, electrical systems, training equipment and/or IT equipment
4	Other Devices for Industrial Automation	Contract similar to supply and/or installation/integration of building automation, electrical systems, and/or training equipment	4	Other Devices for Industrial Automation	Contract similar to supply and/or installation/integration of building automation, electrical systems, training equipment and/or IT equipment
6	IT Networks	Contract similar to supply and/or installation of local area network and video surveillance	6	IT Networks	Contract similar to supply and/or installation of local area network and video surveillance, or IT equipment
7	Security Camera System	Contract similar to supply and/or installation of local area network and video surveillance	7	Security Camera System	Contract similar to supply and/or installation of local area network and video surveillance, or IT equipment

Query : As for Lots 2, 3, 4, 6, and 7, the prospective bidder requested that the supply of IT equipment be treated as a similar contract since the items included in the lots are also considered IT equipment.

Response : The supply of IT equipment is of similar work to said lots. Thus, the prospective bidder may submit such contract as it is similar to the contract to be bid.



 3

3. On the amount of bid security (ITB Clause 14.1 of Section III [Bid Data Sheet])

ORIGINAL				AMENDED			
Lot No.	Title	Cash, Cashier's/ Manager's Check, Bank Draft/ Guarantee or Irrevocable Letter of Credit (2% of ABC)	Surety Bond callable upon demand issued by a surety or insurance company duly certified by the Insurance Commission (5% of ABC)	Lot No.	Title	Cash, Cashier's/ Manager's Check, Bank Draft/ Guarantee or Irrevocable Letter of Credit (2% of ABC)	Surety Bond callable upon demand issued by a surety or insurance company duly certified by the Insurance Commission (5% of ABC)
2	Industrial Automation	P1,242,612.19	P3,106,530.48	2-A	Industrial Automation PKG 1	P548,753.77	P1,371,884.43
				2-B	Industrial Automation PKG 2	P630,888.03	P1,577,220.08
				2-C	Industrial Automation PKG 3	P24,370.69	P60,926.72
				2-D	Industrial Automation PKG 4	P13,710.46	P34,276.14
				2-E	Industrial Automation PKG 5	P24,889.24	P62,223.11

4. On the item(s) for each lot (ITB Clause 19.3 of Section III [Bid Data Sheet])

ORIGINAL

Lot No.	Lot Name	No. of Items	ABC
2	Industrial Automation	9	P62,130,609.66

AMENDED

Lot No.	Lot Name	No. of Items	ABC
2-A	Industrial Automation PKG 1	1	P27,437,688.53
2-B	Industrial Automation PKG 2	1	P31,544,401.68
2-C	Industrial Automation PKG 3	1	P1,218,534.44
2-D	Industrial Automation PKG 4	1	P685,522.88
2-E	Industrial Automation PKG 5	5	P1,244,462.13

5. On the documents to be submitted during post-qualification (ITB Clause 20.2 of the Bid Data Sheet)

Query	: With reference to BIR Revenue Memorandum Circular No. 5-2023, the prospective bidder requested that the 2550Q or Quarterly Filing be acceptable, as tax filing is currently done quarterly.
Response	: The prospective may submit Forms 2550Q covering the previous six (6) months prior to the submission and opening

4

of bids as filed through Electronic Filing and Payment System (eFPS).

6. **On the provision of floor plan for Lot 8**

Query : The prospective bidder requested a copy of the floor layout pan as a reference for the installation of partitions.

Response : The floor plan layout will be provided as Annex A of this Bid Bulletin.

7. **On the provision of floor plan for Lot 9**

Query : The prospective bidder requested for a copy of the floor plan to use as a reference for installing the AC. The distance between the locations of the main units and the outdoor units will also be determined by the said plan.

Response : The floor plan layout will be provided as Annex A of this Bid Bulletin.

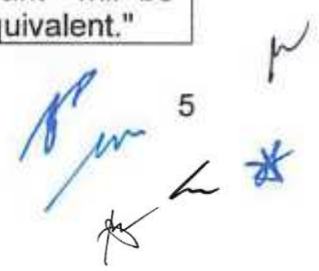
8. **On the technical specifications of the items for Lot 2** (Section VII of the Bidding Documents)

Query : The prospective bidder requested that the technical specifications for the Pressure, Flow, Level, Temperature Process Learning System be changed to be broader so as to remove the weight process and its associated components and parameters. Additionally, they are asking for the Chemical Processing Plant to be removed or revised from the specification because it appears to restrict the bidding process to a specific pilot plant simulation, limiting the opportunities for alternative innovation solutions. The removal of weight process, chemical process and all associated components and parameters will have no impact on the overall quality, functionality, or completion of the project. In addition, the weight process is only a derivative of the four (4) main processes (Pressure, Flow, Level and Temperature) that they believe are the main foundations in Process Control - Industrial Automation.

Response : The request to remove the weight process is denied because it degrades the equipment by reducing its features and learning coverage.

Finally, the phrase "Chemical Processing Plant" will be replaced with "Chemical Processing Plant or equivalent."

5



Kindly refer on the revised Section VI and Section VII of the Bidding Documents incorporating the amendments on Lot 2 - Industrial Automation.

9. **On the technical specifications of the items for Lot 5** (Section VII of the Bidding Documents)

Query	: For 05-003 - Desktop Computer for 3D Design, as there is no available brochure for the entire desktop as it is assembled, the prospective bidder requested that they can provide a reference link for parts/items.
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Response	: Yes, in the absence of brochure for the desktop computer, the bidder can provide the list of parts, make and model with the link to the specification in short URL and/or QR Code format.
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Query	: For 05-005 - Ultralight Laptop, 05-006 - Adobe Creative Cloud All Apps, 05-007 - Microsoft Office 365, in addition to the Brochure/Catalog, the prospective bidder inquired whether the Audio Visual Presentation of items are required during the opening of Bids or during post-qualification.
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Response	: Based on the technical specification, the bidder needs to submit 1) brochure and/or datasheet; and 2) training plan. This can be submitted either as part of its bid offer or before post-qualification evaluation.
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Query	: For 05-007 - Microsoft Office 365, the prospective bidder stated that the specification is for the MS 365 FAMILY, a consumer market product available in retail stores and malls. The Tangible License (physical box) is sold by 365 days as well.
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The digital license is also only available for 365 days. MS 365 for Government or Education use is only available in paper license/digital with 1 year subscription and 1:1 license, not the 1-6 people per license that MS 365 Family offers.

If this is acceptable to TESDA, the prospective bidder will multiply the Tangible License (Physical Box) for the 5-year subscription requirement.

Response	: Regardless of license type, the bidder may propose an equivalent number of users for a 5-year subscription as mentioned in the bidding documents.
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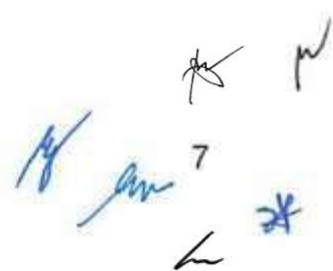
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10. On the technical specifications of the items for Lot 9 (Section VII of the Bidding Documents)

Query	: For 09-001 - Air Conditioning Unit, 2.5 HP Split Type- Floor Mounted, the prospective bidder stated that the "WiFi IOTS" is not applicable to Floor Mounted Type Air-Conditioning Systems.
Response	: The WiFi features on floor type air-conditioning units will be removed. Kindly refer on the revised Section VII of the Bidding Documents incorporating the amendments on Lot 9 - Air Conditioning System.

For the information and guidance of all concerned.


DDG ANICETO D. BERTIZ III
Chairperson
Bids and Awards Committee – A



FLOOR PLANS

SITE: RTC-NCR, East Service Rd., Fort Bonifacio, Taguig



GROUND FLOOR PLAN ON SITE

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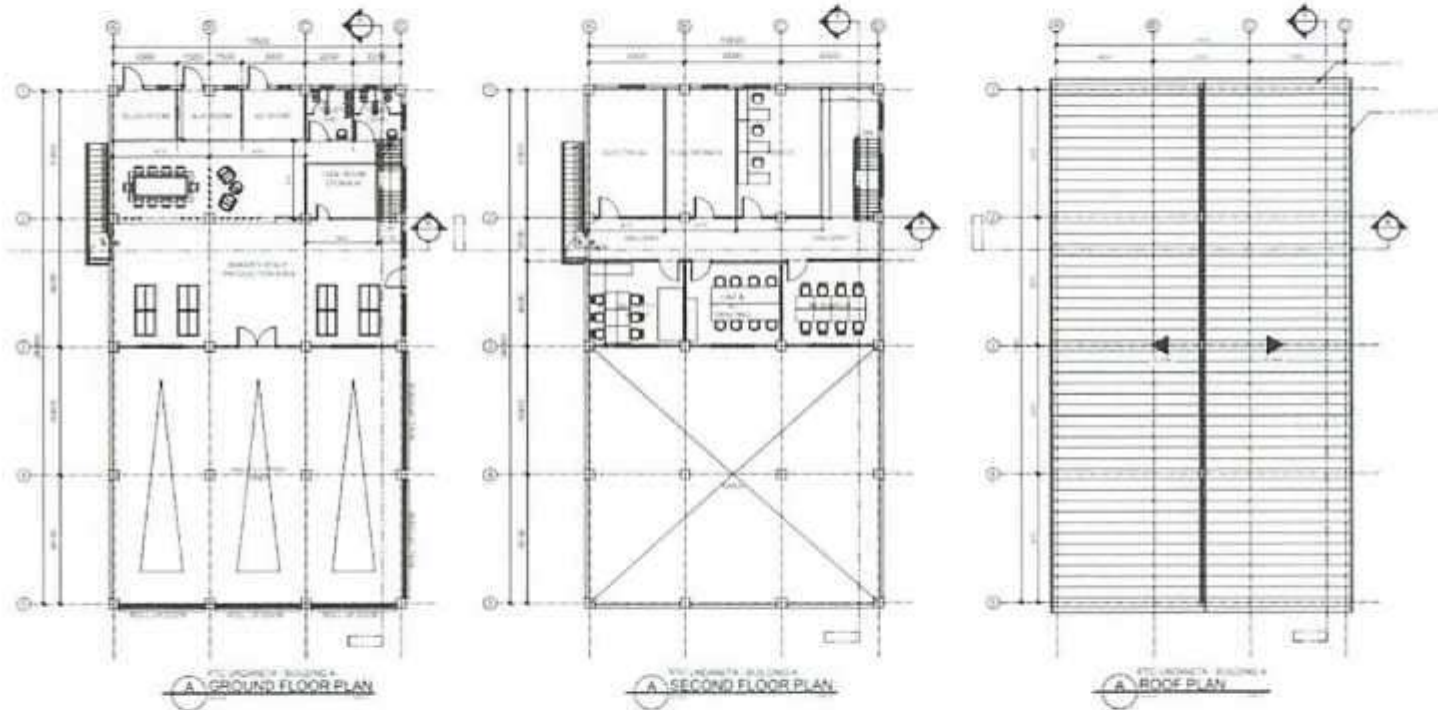


THIRD FLOOR PLAN

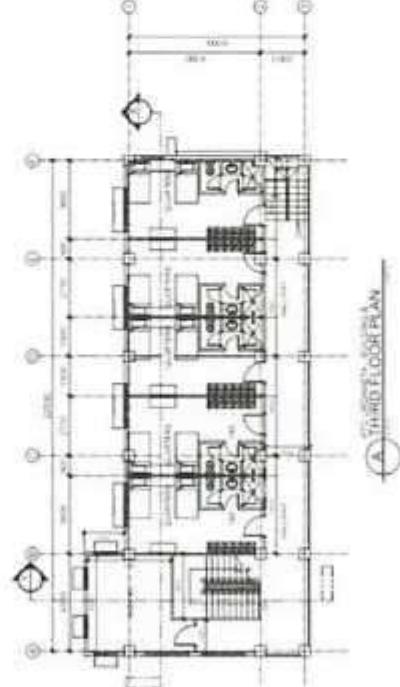
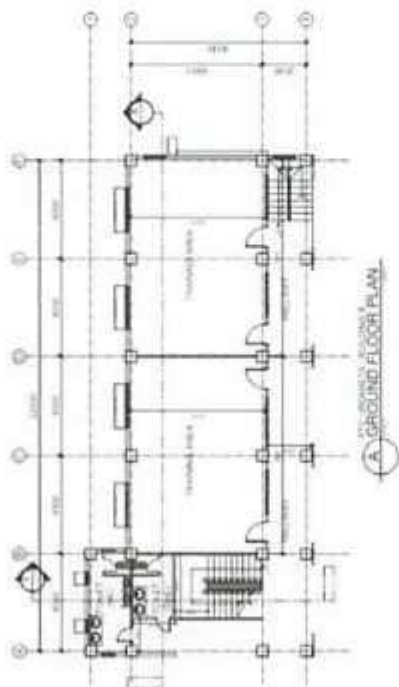
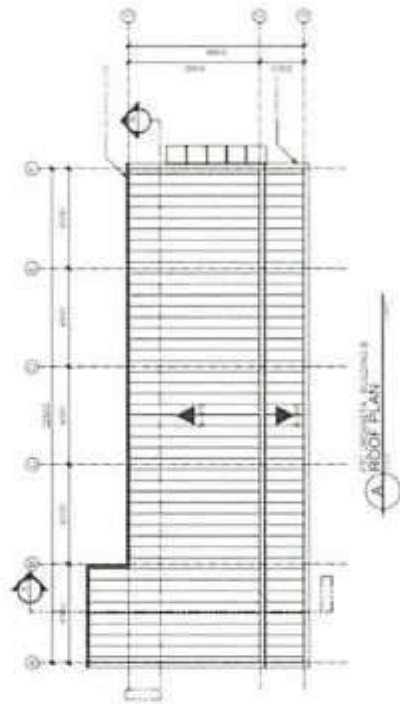
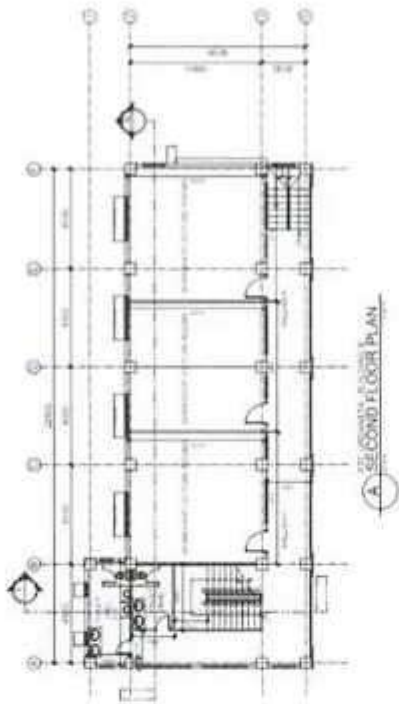
SECOND FLOOR PLAN

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SITE: PTC-Urdaneta, Anonas, Urdaneta City, Pangasinan

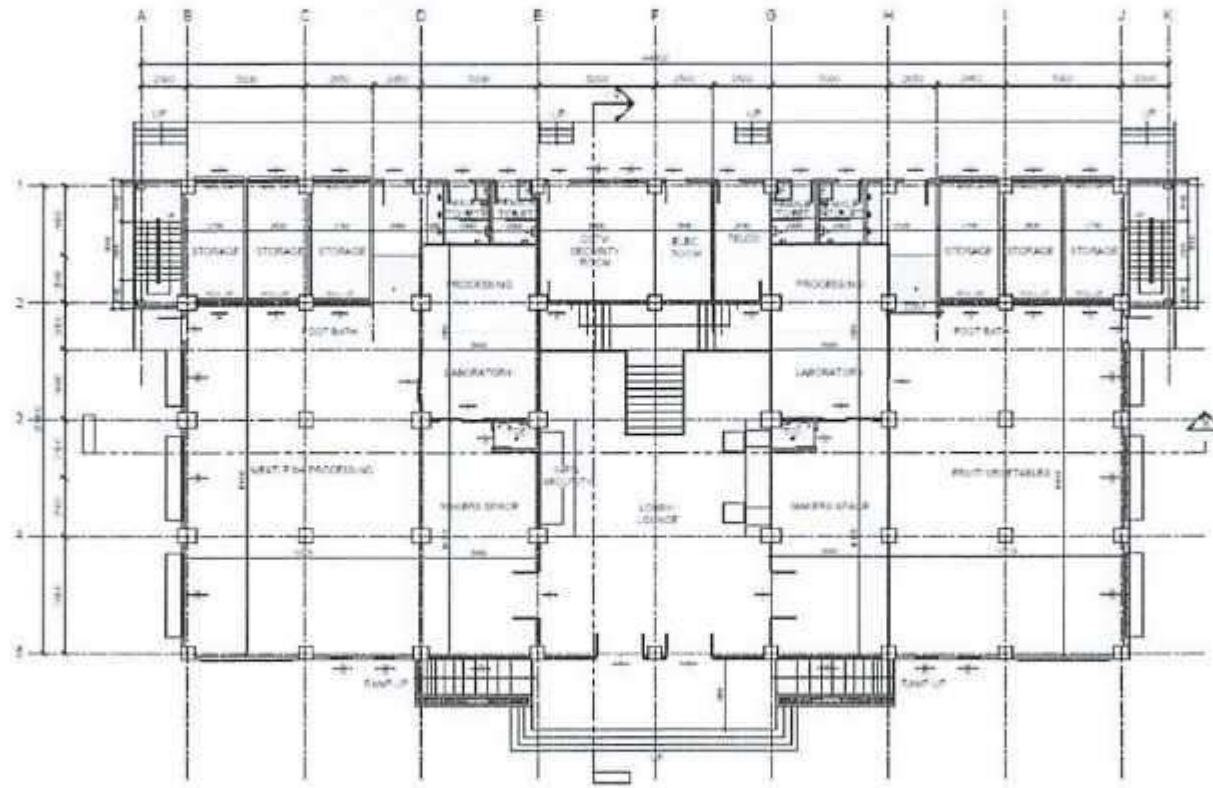


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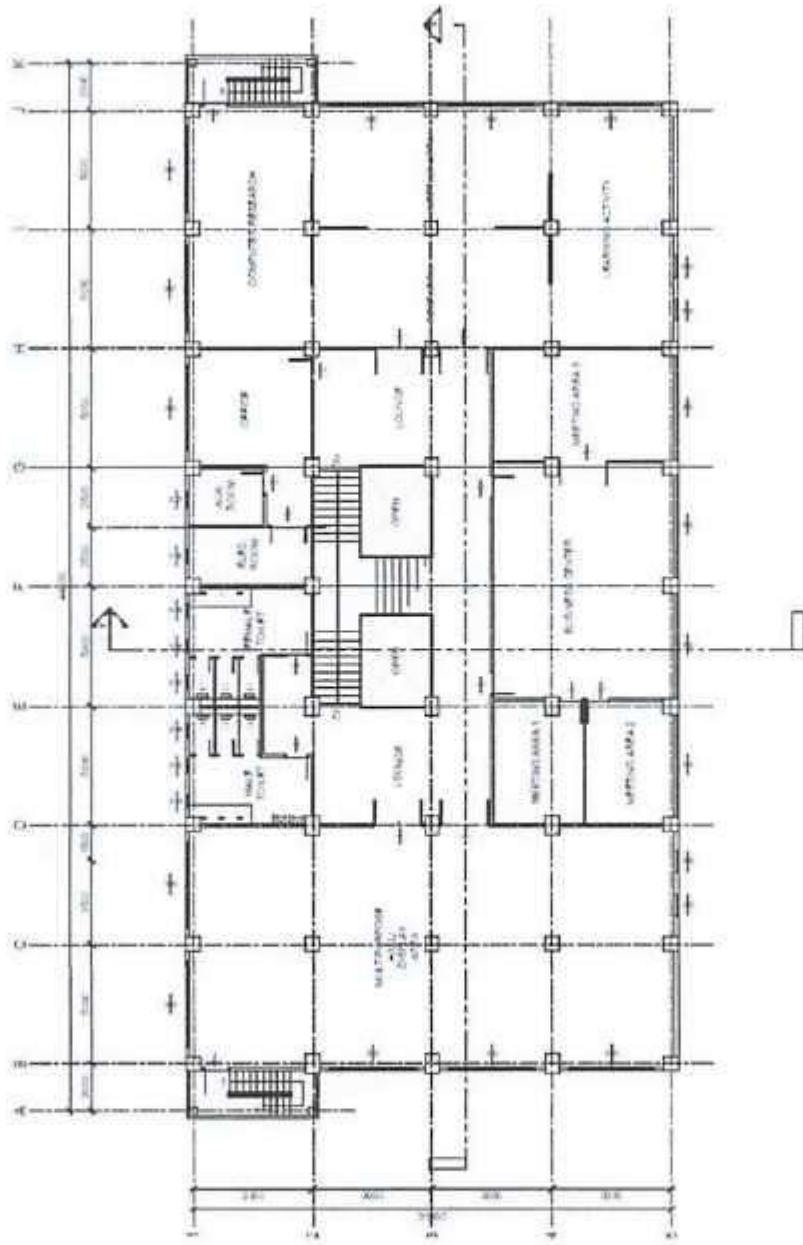
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SITE: Isabela School of Arts and Trades, Calamagui II, Ilagan City, Isabela



TESDA INNOVATION CENTER - ISAT
A GROUND FLOOR PLAN
SCALE 1:2000

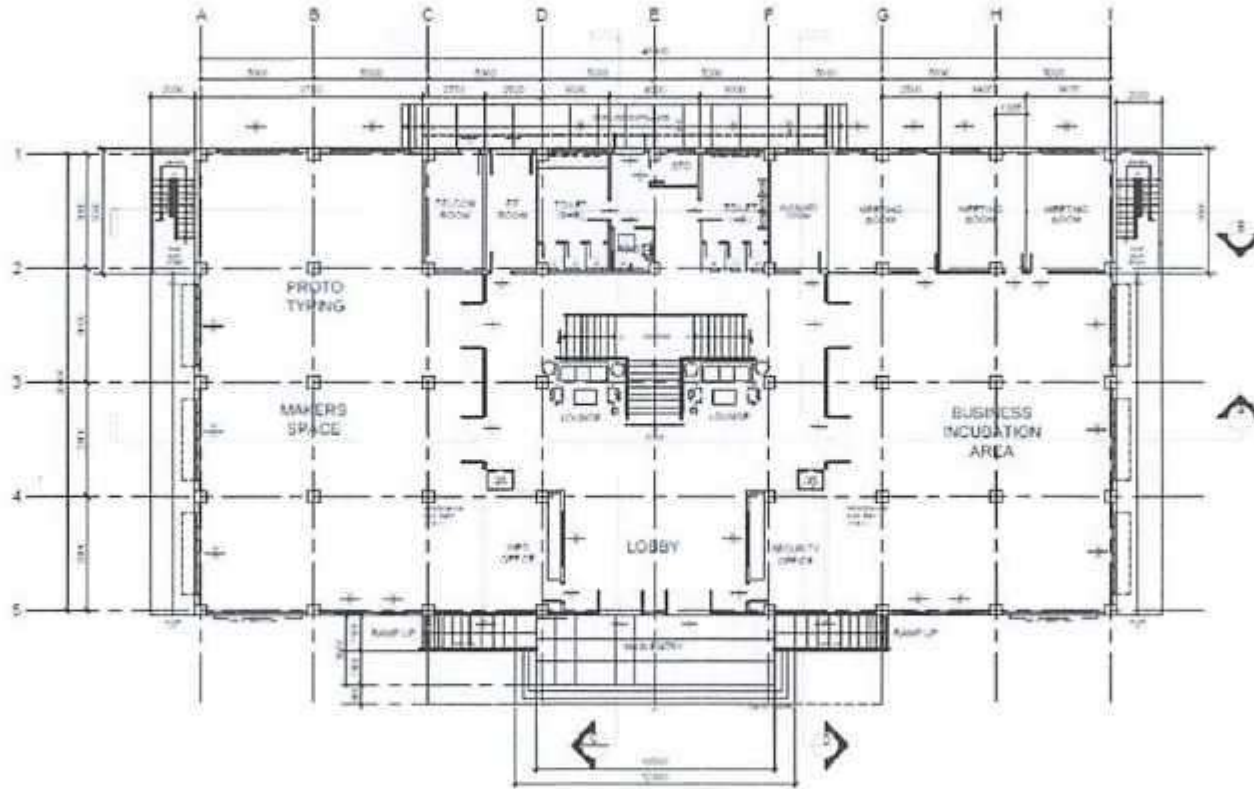
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TESLA INNOVATION CENTER - 2ND
A SECOND FLOOR PLAN
 SCALE 1/200' = 1"

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SITE: RTC-Mariveles, Camaya, Mariveles, Bataan



TESDA INNOVATION CENTER - MARIVELES
A
GROUND FLOOR PLAN
SCALE 1:200/PT

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Section VI. Schedule of Requirements

The delivery schedule expressed in calendar days stipulates hereafter a delivery date which is the date of delivery to the designated delivery address of the Regional TVET Innovation Centers (RTICs), as well as the distribution list attached as **Annex B** and **Annex C**.

Lot No.	Description	Delivered Weeks/Months
1	Food Processing Laboratory	Within sixty (60) calendar days upon receipt of Notice to Proceed
2-A	Industrial Automation PKG 1	
2-B	Industrial Automation PKG 2	
2-C	Industrial Automation PKG 3	
2-D	Industrial Automation PKG 4	
2-E	Industrial Automation PKG 5	
3	Building Automation	
4	Additional Devices for Industrial Automation	
5	IT Equipment	
6	IT Networks	
7	Security Camera System	
8	Office Furniture and Equipment	
9	Air Conditioning System	
10	Transport Refrigeration	

A. Scope of work

This project shall cover the following:

- delivery, installation, commissioning of goods; and
- training of trainers

B. Installation Requirements and Arrangements

- The end-user shall ensure that the installation site for the equipment is ready prior to the delivery of goods: This may include:
 - provision of equipment layout; and/or
 - access to source line (power and/or water). Tapping/connection point should not be more than 10 ft away from the location of the equipment to be installed.

- The supplier shall cover for the cost of the following:
 - Electrical system – which may include the following: enclosure/s, protective device(s), conduit and wires (10 ft)
 - Frame/Mounting platform/fixtures
 - Piping system (10 ft), as applicable
 - Provision of special/proprietary tools and/or instruments needed for the installation and/or configuration of the equipment. This tool/ instrument shall be turned over to the end user as part of the equipment package.

C. Training Requirements and Arrangements

The procurement of goods under this project includes two levels of training:

- Level 1: Utilization and maintenance (1~2 days)
The winning bidder per lot will provide training on the familiarization, utilization, and maintenance of each equipment.
- Level 2: Technology specific training (10 days per lot or 2 weeks)
The winning bidder on the following lots will provide face-to-face or hybrid training, see details below:

Note: Hybrid training should have at least five days face-to-face session

- Lot 1: Food Processing Laboratory
The training should cover design, installation set-up, configuration, programming and operation of the equipment. Moreover, the training should also provide training in the use the equipment to at least two food processes per machine.
- Lot 2-A: Industrial Automation PKG 1
The training should cover design, installation set-up, configuration, programming and operation. The training should also cover a walk through on the course and learning materials that come with the package. See technical specification of this lot for details.
- Lot 2-B: Industrial Automation PKG 2
The training should cover design, installation set-up, configuration, programming and operation. The training should also cover a walk through on the course and learning materials that come with the package. See technical specification of this lot for details.
- Lot 2-C: Industrial Automation PKG 3
The training should cover design, installation set-up, configuration, programming and operation. The training should also cover a walk through on the course and learning materials that come with the package. See technical specification of this lot for details.

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- Lot 2-D: Industrial Automation PKG 4
The training should cover design, installation set-up, configuration, programming and operation. The training should also cover a walk through on the course and learning materials that come with the package. See technical specification of this lot for details.
- Lot 2-E: Industrial Automation PKG 5
The training should cover design, installation set-up, configuration, programming and operation. The training should also cover a walk through on the course and learning materials that come with the package. See technical specification of this lot for details.
- Lot 3: Building Automation
The training should cover installation, configuration, development of programs using different cases of building management and automation systems. The training should cover at least five (5) different building automation use cases and a certification training to at least two (2) TESDA personnel in KNX.
- Lot 4: Other Devices for Industrial Automation
The training should cover installation, configuration, development of programs using different cases of building management and automation systems. The training should cover at least five (5) different building automation use cases.
- Lot 5: IT Equipment
The training should cover familiarization with the features of each device/gadget/equipment, the OS environment and the use of the creative software bundle in data analytics, marketing and promotional materials development.

The training will be held at the institution where the equipment will be delivered. The receiving institutions will cover the costs of the training venue, snacks and meals during training while the supplier will cover all other costs such as, but not limited to:

- Honoraria of the trainer;
- Accommodation of the trainer;
- Supplies and materials required for the training; and
- Reproduction of the learning materials (maximum of 10 copies).

I hereby commit to comply and deliver all the above requirements in accordance with the above stated schedule.

Name of Company/Bidder	Signature over Printed Name of Authorized Representative	Date
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Technical Specifications

Lot 2-A

: Industrial Automation PKG 1

No.	Item	Minimum Agency Specifications Unless Otherwise Specified	Qty	Unit	Statement of Compliance *	Make Brand / Model	Reference
1	Pressure, Flow, Level, Temperature Process Learning Systems	Kindly refer to the technical specifications attached as Revised Annex D2-A.	1	set			

* Bidders must state here either "Comply" or "Not Comply" against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of "Comply" or "Not Comply" must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer's un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidder's statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the applicable laws and issuances.

All tools, equipment, gadgets and electrically operated instruments should have Standard Manufacturers Manual and/or Datasheet/Specification Sheet/Brochure as indicated in Revised Annex D2-A.

Instruction Manual is an instructional book or booklet that is supplied with almost all technologically advanced products such as electrical products.

Datasheet/Specification Sheet/Brochure is a document that summarizes the performance and other characteristics of a product, machine, component that comes along with the product from its release from the manufacturer.

I hereby certify that the statement of compliance to the foregoing technical specifications are true and correct, otherwise, if found to be false either during bid evaluation or post-qualification, the same shall give rise to automatic disqualification of our bid.

Name of Company/Bidder

Signature over Printed Name of Authorized Representative

Date

**REVISED
ANNEX D2-A**

Lot No.	Lot	Code	Item	Agency Specification	Classification	Test Procedure (Post Evaluation)	Test Procedure (Inspection and Acceptance)	English Manual
2	Industrial Automation	02-001	Pressure, Flow, Level, Temperature Process Learning Systems	Refer to Technical Specification of Item Code 02-001	Learning System	Evaluation of Brochure with picture and/or data sheet and training proposal	<ul style="list-style-type: none"> - Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing 	Yes

I hereby certify that the statement of compliance to the foregoing technical specifications are true and correct, otherwise, if found to be false either during bid evaluation or post-qualification, the same shall give rise to automatic disqualification of our bid.

Name of Company/Bidder

Signature over Printed Name of Authorized Representative

Date

TECHNICAL SPECIFICATION

Name of the Learning System	Pressure, Flow, Level, and Temperature Process Learning Systems
Item Code	02-001
Technology Area(s)	Industrial Automation

General Description

This training equipment simulates an automated industrial process control using distributed control system and programmable control system (PLC) technologies. With this equipment, one can learn to install sensors and monitoring devices, wiring of electrical circuits, configuration of instrumentation devices and controls, programming of PLC, debugging of programs and operation and monitoring of automated process control systems.

Required Topics/Lessons:

- Installation and application of PLC programming software
- Programming and Application of DCS Control System
- Application of DCS Communication System
- Installation and Application of Process Control Equipment Piping
- Installation and application of pressure transmitter
- Installation and Application of Temperature Transmitter
- Installation and application of flow sensor
- Installation and application of liquid level transmitter
- Installation and Application of Weight Sensor
- Application of Industrial Automation Network
- Installation and wiring application of digital network intelligent measurement and control system
- Application of Instrument Communication System
- Cognition and application of production process technology
- Safe and civilized production

Technical Description

- **Description of system operation**

This training simulator will consist of the following sub-systems:

No	Training Platforms	Qty	Unit Measure
1	<p>Mini-industrial process/System process <i>This training equipment is a simulation of a chemical processing plant or equivalent wherein it feeds material to a reactor through two feedlines for batching. The batching system is composed of two (2) raw material tanks and product mixing tanks. The system can perform functions such as precise proportioning of materials, timing control, and material mixing according to process requirements. The system allows monitoring and control of process variables such as pressure, level, flow and temperature, weight and others.</i></p>	1	set

No	Training Platforms	Qty	Unit Measure
2	<p>Intelligent measurement and control system <i>DCS system can support multi-domain control and operation, and has multi-programming language support in compliance with IEC international standards; including SFC, CFC, ST, LD and other languages, the system has fail-safe functions and complete project management functions, including multi-engineer collaborative work, configuration integrity management, online single-point configuration download, configuration and operation authority management, etc., and provide historical traceability of relevant operation records. The system is compatible with MODBUS, HART and other international standard field buses and the comprehensive integration of various heterogeneous systems. The system should allow real-time monitoring of subsystems over LAN and cloud.</i></p>	1	set
3	<p>Energy management platform <i>This platform allows monitoring and control of all electrical parameters in the system in local and remote computers/devices</i></p>	1	set
4	<p>Visualization platforms <i>This is composed of computer/s where the dashboard on process variable status and process simulation are displayed accessible in local and remote computers/devices</i></p>	1	set
5	<p>Training platform <i>This includes reference materials, exercises/activities (20+ activities), 1 set of tools needed to service the equipment, and 1 spool of electrical wires (per color used in the system).</i></p>	1	set

- **General parameters**

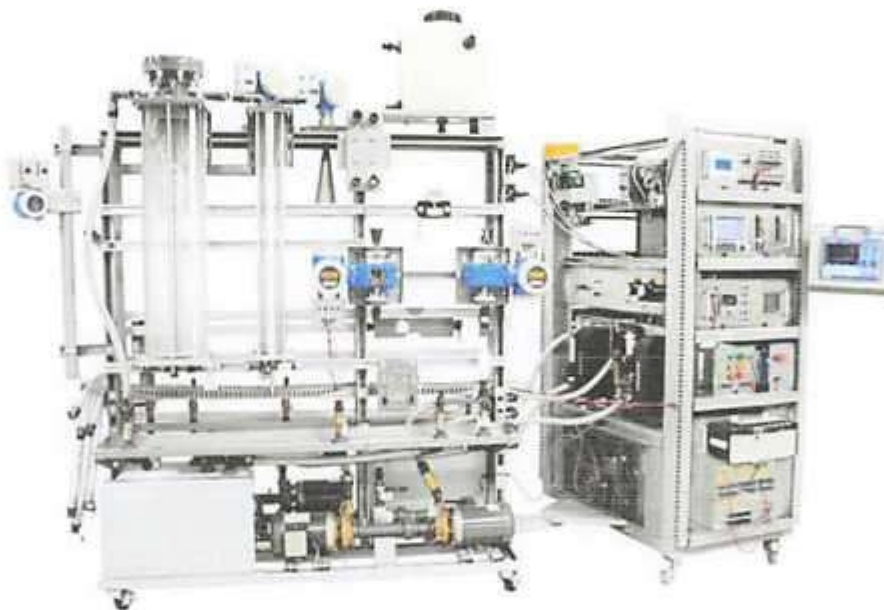
- Working power supply 220 ± 10% 60Hz single phase (a transformer should be provided if the system requires other power supply)
- Protection: Overpressure, over temperature, liquid level alarm and emergency stop.
- Overall size should not be greater than 2m (width) x 3m (height) to ensure that ingress of the machine will not be an issue.
- Two (2) computer/s for programming and visualization should be Windows 11 compatible, 20 cores, 32 GB RAM, 1TB SSD, 2TB HDD, 2x 1Gbit LAN port and dual 27~34 inches monitor with 2K resolution and 21:9 or 16:9 image aspect ratio.
- DCS controller:
 - Supports PROFIBUS/HART/MODBUS and other common international fieldbus. Third-party devices, such as intelligent instruments, PLCs, and inverters are easily added.
 - Centralized supervision in real time
 - Centralized/decentralized I/O modules,
 - Decentralized risks and control
 - Open system architecture supporting OPC industrial standards
- Programmable Logic Controller/s
 - Ethernet and other communication standards
 - Support cloud-based monitoring and control
 - With digital and analog I/Os
 - Expandable centrally and on distributed basis

- Field devices
 - Pressure Transmitter, 0-100 Kpa 4-20mA, HART protocol
 - Level Transmitter 0-5 Kpa 4-20mA, HART protocol
 - Temperature Transmitter 0-100°C 4-20mA, HART protocol
 - Flow Sensors-RS485 communication
 - Weight sensor 0-10 kg RS485

- Software (2 users), compatible to latest release of Windows
 - PLC Programming software
 - Visualization design software
 - DCS Monitoring and supervision software

- Set of tools for equipment servicing
- This includes curriculum and instruction to exercises in print and digital format
- Extra hoses and electrical wires

Sample Image:



Picture for reference only

I hereby certify that the statement of compliance to the foregoing technical specifications are true and correct, otherwise, if found to be false either during bid evaluation or post-qualification, the same shall give rise to automatic disqualification of our bid.

Name of Company/Bidder	Signature over Printed Name of Authorized Representative	Date
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Technical Specifications

Lot 2-B : Industrial Automation PKG 2

No.	Item	Minimum Agency Specifications Unless Otherwise Specified	Qty	Unit	Statement of Compliance *	Make Brand / Model	Reference
1	Industrial Automation 4.0	Kindly refer to the technical specifications attached as Revised Annex D2-B.	1	set			

* Bidders must state here either "Comply" or "Not Comply" against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of "Comply" or "Not Comply" must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer's un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidder's statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the applicable laws and issuances.

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Instruction Manual is an instructional book or booklet that is supplied with almost all technologically advanced products such as electrical products.

Datasheet/Specification Sheet/Brochure is a document that summarizes the performance and other characteristics of a product, machine, component that comes along with the product from its release from the manufacturer.

I hereby certify that the statement of compliance to the foregoing technical specifications are true and correct, otherwise, if found to be false either during bid evaluation or post-qualification, the same shall give rise to automatic disqualification of our bid.

Name of Company/Bidder	Signature over Printed Name of Authorized Representative	Date
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**REVISED
ANNEX D2-B**

Lot No.	Lot	Code	Item	Agency Specification	Classification	Test Procedure (Post Evaluation)	Test Procedure (Inspection and Acceptance)	English Manual
2	Industrial Automation	02-002	Industrial Automation 4.0	Refer to Technical Specification of Item Code 02-002	Equipment	Evaluation of Brochure with picture and/or data sheet and training proposal	<ul style="list-style-type: none"> - Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing 	Yes

I hereby certify that the statement of compliance to the foregoing technical specifications are true and correct, otherwise, if found to be false either during bid evaluation or post-qualification, the same shall give rise to automatic disqualification of our bid.

Name of Company/Bidder

Signature over Printed Name of Authorized Representative

Date

Handwritten signatures and initials in blue ink, including a large signature and several smaller initials.

TECHNICAL SPECIFICATION

Name of the Equipment	Industrial Automation 4.0
Item Code	02-002
Technology Area(s)	Industrial Automation

General Description

Represents a networked production system consisting of four pallet transfer systems with different application modules.

Prerequisites for creating the following process sequence after linking and starting a batch size 1 routing:

- The magazine module provides a housing shell
- The quality data collection is performed using the measuring module's analog distance sensors
- The drilling module performs an order-based simulated drilling operation on the front shell
- The output module performs the process end: workpiece output

Application Modules:

- Magazine Application Module (RFID, process Start)
- Analog Measuring Application Module (QS, Statistical Process Control, Analytics)
- Drilling Application Module (CPS, Production Parameters, Variants)
- Output Application Module (Parameter processing, Flexible handling, Logistics)

Supplements:

- Data Analytics and Virtual Reality

Technical Data

- Operating Pressure: 600 kPA (6 bar)
- Dimensions: approx 1800x1800x1800 mm

Training Content:

- CP Lab Design and Layout
- Sensors/Actuators
- Process Modules

- Conveyor Belt
- Network
- Process and Operations Management Level
- Recording information using intelligent sensors
- Control using PLC
- Communication based on bus technologies
- Binary pallet identification
- RFID identification
- Flexible production, one-off orders
- Quality management and SPC
- Plug & Produce: quick integration of new application modules using cyber-physical systems

Manufacturing Execution System (MES) training content

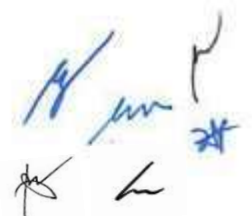
- Define and edit order workflows and process plans
- Read orders and update status
- Sort order lines
- Write goods carrier allocations to the order
- Create a material, including workpiece graphics
- Add machines, including power consumption
- Add warehouse data and material buffers
- Add and manage customer data
- Define system layouts with icons
- Generate OEE, SPC and malfunction reports, including graphics

Included Software

- 1 PC with TFT monitor
- Programming and management software with 6 network licenses, educational license

Inclusions:

- Installation and Commissioning
- Technical Instruction
- 2-year warranty



Sample Image:



Picture for reference only

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**Name of
Company/Bidder**

**Signature over Printed Name of
Authorized Representative**

Date

[Handwritten signatures and initials in blue ink]

Technical Specifications

Lot 2-C

: Industrial Automation PKG 3

No.	Item	Minimum Agency Specifications Unless Otherwise Specified	Qty	Unit	Statement of Compliance *	Make Brand / Model	Reference
1	IoT and Embedded Applications Complete Set	Kindly refer to the technical specifications attached as Revised Annex D2-C.	4	set			

* Bidders must state here either "Comply" or "Not Comply" against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of "Comply" or "Not Comply" must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer's un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidder's statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the applicable laws and issuances.

All tools, equipment, gadgets and electrically operated instruments should have Standard Manufacturers Manual and/or Datasheet/Specification Sheet/Brochure as indicated in Revised Annex D2-C.

Instruction Manual is an instructional book or booklet that is supplied with almost all technologically advanced products such as electrical products.

Datasheet/Specification Sheet/Brochure is a document that summarizes the performance and other characteristics of a product, machine, component that comes along with the product from its release from the manufacturer.

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Name of Company/Bidder

Signature over Printed Name of Authorized Representative

Date

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**REVISED
ANNEX D2-C**

Lot No.	Lot	Code	Item	Agency Specification	Classification	Test Procedure (Post Evaluation)	Test Procedure (Inspection and Acceptance)	English Manual
2	Industrial Automation	02-003	IoT and Embedded Applications Complete Set	Refer to Technical Specification of Item Code 02-003	Equipment	Evaluation of Brochure with picture and/or data sheet and training proposal	<ul style="list-style-type: none"> - Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing 	Yes

I hereby certify that the statement of compliance to the foregoing technical specifications are true and correct, otherwise, if found to be false either during bid evaluation or post-qualification, the same shall give rise to automatic disqualification of our bid.

Name of Company/Bidder

Signature over Printed Name of Authorized Representative

Date

Handwritten signatures in blue ink, including a large signature and several smaller initials.

TECHNICAL SPECIFICATION

Name of the Equipment	IoT and Embedded Applications Complete Set
Item Code	02-003
Technology Area(s)	Industrial Automation

General Description

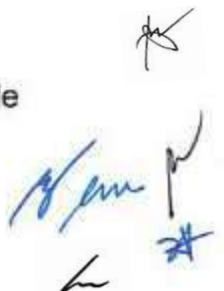
Digi IoT development kits include boards, modules and accessories for rapid prototyping, testing and development of wireless applications. Starter Kit is selected from a varied assortment of smart devices to form a delicate gadget bundle, which is suitable for asset and personnel management, environment monitoring.

Capabilities

- IOT Cellular Development
 - Cellular Smart Modem
 - LTE-M/NB-IoT Development Kit with XBIB-C Dev Board
 - Cellular LTE-M/NB-IoT Development Kit with XBIB-C Dev Board
- RF Module Development Kits
 - Zigbee Mesh Kit Worldwide
 - Development Kit
 - RF Module Dev Kit US/CA
- Embedded SOM Development Kits
 - Development Kit including Development Board with DigiConnectCore MP157 dual 512MB/512MB Wireless SOM
 - Development Kit with Development Board and Dual-Core NPU, 8GB eMMC, 1GB LPDDR\$ Wireless SOM
 - Digi ConnectCore Mini Development Kit
 - Digi ConnectCore Nano Development Kit
 - Digi ConnectCore 8x Pro Development Kit
 - Standard and Deluxe Development Kit

Kit Contents Include:

- Module
- Interface board with standoffs/connectors
- Prototyping board with standoffs/connectors
- USB cable to program the kit via interface board
- Dynamic C CD-ROM which includes Digi Device Cloud library and samples
- Getting Started instructions
- Universal AC adapter, 5 V DC, 2 A
- Digital I/O and serial communication accessory boards
- CAT 5/6 Ethernet cable and DB-9 to 10-pin header serial cable



Sample Image:



Picture for reference only

I hereby certify that the statement of compliance to the foregoing technical specifications are true and correct, otherwise, if found to be false either during bid evaluation or post-qualification, the same shall give rise to automatic disqualification of our bid.

**Name of
Company/Bidder**

**Signature over Printed Name of
Authorized Representative**

Date

[Handwritten signatures and initials in blue ink]

Technical Specifications

Lot 2-D

: Industrial Automation PKG 4

No.	Item	Minimum Agency Specifications Unless Otherwise Specified	Qty	Unit	Statement of Compliance *	Make Brand / Model	Reference
1	Home Plant Factory	Kindly refer to the technical specifications attached as Revised Annex D2-D.	4	set			

* Bidders must state here either "Comply" or "Not Comply" against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of "Comply" or "Not Comply" must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer's un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidder's statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post-qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the applicable laws and issuances.

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Datasheet/Specification Sheet/Brochure is a document that summarizes the performance and other characteristics of a product, machine, component that comes along with the product from its release from the manufacturer.

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<p>Name of Company/Bidder</p>	<p>Signature over Printed Name of Authorized Representative</p>	<p>Date</p>
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**REVISED
ANNEX D2-D**

Lot No.	Lot	Code	Item	Agency Specification	Classification	Test Procedure (Post Evaluation)	Test Procedure (Inspection and Acceptance)	English Manual
2	Industrial Automation	02-004	Home Plant Factory	Refer to Technical Specification of Item Code 02-004	Equipment	Evaluation of Brochure with picture and/or data sheet and training proposal	<ul style="list-style-type: none"> - Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing 	Yes

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Type text here

Name of Company/Bidder

Signature over Printed Name of Authorized Representative

Date

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TECHNICAL SPECIFICATION

Name of the Equipment	Home Plant Factory
Item Code	02-004
Technology Area(s)	Industrial Automation

Specifications:

No. of Layer: 2

Production capacity: at least 23 per layer per 20 days

Production Area: 152L

Nutrient Volume: 28L

Climate Control: Temperature and humidity, automatic

Water supply: internal water tank

Control: LCD panel or better

Noise: 45dB

Material: powder coated stainless steel body, glass door

Type: Vertical, free-standing

Power: <4kW, 220V 60Hz

Dimension: ≤ 740*660*1460 mm

Movable tray

With 4 wheels

Sample Image:



Picture for reference only

hereby certify that the statement of compliance to the foregoing technical specifications are true and correct, otherwise, if found to be false either during bid evaluation or post-qualification, the same shall give rise to automatic disqualification of our bid.

Name of
Company/Bidder

Signature over Printed Name of
Authorized Representative

Date

[Handwritten signature and date]

Technical Specifications

Lot 2-E

: Industrial Automation PKG 5

No.	Item	Minimum Agency Specifications Unless Otherwise Specified	Qty	Unit	Statement of Compliance *	Make Brand / Model	Reference
1	Irrigation Controller	Kindly refer to the technical specifications attached as Revised Annex D2-E.	4	unit			
2	Smart Environment Controller		4	unit			
3	LED Grow Light Board		4	unit			
4	Soil Moisture Sensor		4	unit			
5	Agricultural Drone		1	set			

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Name of Company/Bidder	Signature over Printed Name of Authorized Representative	Date
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**REVISED
ANNEX D2-E**

Lot No.	Lot	Code	Item	Agency Specification	Classification	Test Procedure (Post Evaluation)	Test Procedure (Inspection and Acceptance)	English Manual
2	Industrial Automation	02-005	Irrigation Controller	<ul style="list-style-type: none"> • 8-Zone Indoor/Outdoor Sprinkler Controller • WiFi connection • Auto adjust to weather • Automated watering schedules • Compatible with Amazon Alexa, Google Assistant, Apple iOS 8 or greater, and Android 6.0 (Marshmallow) or later • Free Mobile Application • 110V-220V 	Measuring Instruments	Evaluation of Brochure with picture and/or data sheet and training proposal.	<ul style="list-style-type: none"> - Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing 	Yes
2	Industrial Automation	02-006	Smart Environment Controller	<ul style="list-style-type: none"> • Display: Digital LCD • No. of Device Supported: 4 • Probe length: 12 ft. • Operating Humidity: 35 to 85% RH • Programming: Level Control, Temperature and Humidity Triggers, Timers, Cycles, Schedules, Minimum Level • Back-up Memory: YES • Independent Control: YES • App Connectivity: Bluetooth • Compatibility: Cloudline, Airlift, Cloudway, Cloudlift, longrid, IonBoard • Accessory: Adapter cord, at least 6.5 inches 	Measuring Instruments	Evaluation of Brochure with picture and/or data sheet and training proposal.	<ul style="list-style-type: none"> - Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing 	Yes

Lot No.	Lot	Code	Item	Agency Specification	Classification	Test Procedure (Post Evaluation)	Test Procedure (Inspection and Acceptance)	English Manual
2	Industrial Automation	02-007	LED Grow Light Board	<ul style="list-style-type: none"> • Coverage: at least 4 x 4 ft. • LEDs: Samsung LM301B • Controller: 5-level dimming knob 40% /50% /60% /80% /100% /OFF • Lifespan: at least 100,000 hrs. • Diode Count: 1024 • Efficiency: at least 2.7 $\mu\text{mol}/\text{j}$ • PPF: 1854 • Heatsink: 4mm thick • Material: Aluminum, IP65 • Input power: 200W-400W • Includes a pair of metal bar hangers and rope hangers 	Measuring Instruments	Evaluation of Brochure with picture and/or data sheet and training proposal	<ul style="list-style-type: none"> - Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing 	Yes
2	Industrial Automation	02-008	Soil Moisture Sensor	<ul style="list-style-type: none"> • 4-in-1 with PH, temperature, moisture, and sunlight meter • 7-8" probe length • Soil Detector Range: <ul style="list-style-type: none"> - Sunlight: LOW-, LOW, LOW+, NOR-, NOR+, HGH, HGH-, HGH+ - Moisture: DRY+, DRY, NOR, WET, WET+ - pH: 3.5-6.5 (Low), 7.0 (Neutral), 7.5-9.0 (Alkaline) - Temperature: -9 to 50°C (16 to 122°F) • Digital LCD Display • Stainless steel, silicone cap • 4x AAA battery 	Measuring Instruments	Evaluation of Brochure with picture and/or data sheet and training proposal	<ul style="list-style-type: none"> - Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing 	Yes

Lot No.	Lot	Code	Item	Agency Specification	Classification	Test Procedure (Post Evaluation)	Test Procedure (Inspection and Acceptance)	English Manual
2	Industrial Automation	02-009	Agricultural Drone	UAV sprayer drone Payload: 50L Working Speed: 5-10 m/s Duration of flight: 10-15 min (full payload) Spray width: at least 8-10 m Working efficiency: at least 5-8 acres/min Wheelbase: 2560mm No. of Nozzle: 12, interchangeable No. of Axis: 8, foldable Accessories: - 1 x remote control, FPV screen - 1 x terrain/obstacle radar - 1 x charger - 1 x smart battery, 28000 mAh	Equipment	Evaluation of Brochure with picture and/or data sheet and training proposal	- Checking the conformity with the quantity including parts and accessories - Checking the conformity of hardware vis-a-vis offered specifications - Functionality testing	Yes

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Type text here

Name of Company/Bidder

Signature over Printed Name of Authorized Representative

Date

Technical Specifications

Lot 9

: Air Conditioning System

No.	Item	Minimum Agency Specifications Unless Otherwise Specified	Qty	Unit	Statement of Compliance*	Make Brand / Model	Reference
1	Air Conditioning Unit, 2.5 HP Split Type- Floor Mounted	Kindly refer to the technical specifications attached as Revised Annex D9 .	43	set			
2	Air Conditioning Unit, 1.5 HP Split Type- Wall Mounted		27	set			

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Signature over Printed Name of Authorized Representative

Date

**REVISED
ANNEX D9**

Lot No.	Lot	Code	Item	Agency Specification	Classification	Test Procedure (Post Evaluation)	Test Procedure (Inspection and Acceptance)	English Manual
9	Air Conditioning System	09-001	Air Conditioning Unit, 2.5 HP Split Type- Floor Mounted	<ul style="list-style-type: none"> • 2.5 hp • Split Type (Floor Mounted) • Inverter • Power Consumption: 200-2200W • Max Cooling Capacity: 20,500 kJ/h • Indoor Noise Level (Lo): 38-43 dB(A) • Indoor Air Flow (Hi): 635-700 cfm • Power Supply: 220-240 volts, 60 Hz, 1 phase • supply, delivery, installation and commissioning 	Furniture	Evaluation of Brochure with picture and/or data sheet	<ul style="list-style-type: none"> - Checking of specification and quantity (offered vs. actual) - Check package completeness - Functionality test 	Yes
9	Air Conditioning System	09-002	Air Conditioning Unit, 1.5 HP Split Type- Wall Mounted	<ul style="list-style-type: none"> • 1.5 hp • Split Type (Wall Mounted) • Inverter • Power Consumption: 160-1890W • Max Cooling Capacity: 14,298 kJ/h • Indoor Noise Level (Lo): 31 dB(A) • Indoor Air Flow (Hi): 600 m3/h • Power Supply: 220-240 volts, 60 Hz, 1 phase • WiFi IOTS • supply, delivery, installation and commissioning 	Furniture	Evaluation of Brochure with picture and/or data sheet	<ul style="list-style-type: none"> - Checking of specification and quantity (offered vs. actual) - Check package completeness - Functionality test 	Yes

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Name of Company/Bidder

Signature over Printed Name of Authorized Representative

Date